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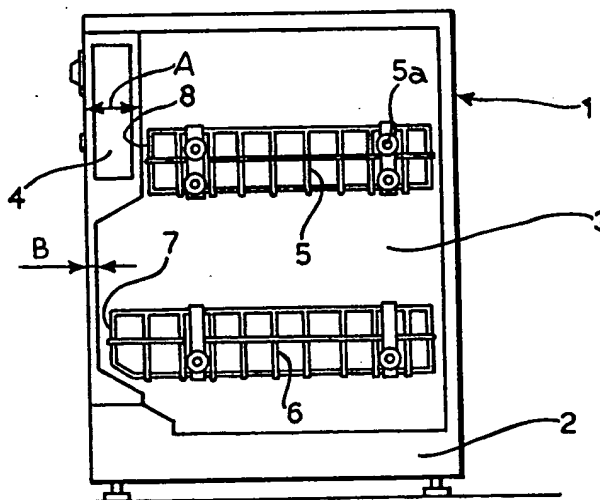
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(54) **Dishwasher basket.**

(57) A basket to be used in a dishwashing machine is characterized in that it consists of a basic module and a series of additional elements which can be coupled to the basic module in a separable manner in order to adapt the basket to the size of the washing vessel of the machine in the area where the basket has to be located. The invention is applicable in particular to the case of a dishwashing machine having at least two baskets one over the other and a first basket presents a front wall which, in operating condition, faces toward the machine door and leans out beyond the corresponding front wall of a second basket. In this particular case the said basic module presents a size which corresponds to the size of the second basket and an auxiliary containing element is provided which may be coupled to the front side of the basic module in order to adapt the latter to be used as the first basket. Auxiliary brackets are provided which can be snapped on the lateral sides of the basic module and which bear the guide rollers of the basket; moreover various kinds of holders are provided for the dishes, which can be located inside the basic module in order to adapt the latter to the various kinds of pottery to be put inside the basket.



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Dishwasher basket

The present invention refers to baskets to be used in dishwashing machines, in particular machines having at least two baskets, one  
5 over the other, a first basket having a front wall which in the operating condition faces toward the machine door and leans out beyond the corresponding front wall of a second basket.

In dishwashing machines of the above said type the first and the second basket are different both for the above said reason and for  
10 the different kind and shape of the built-in holders for the dishes, and for the different arrangement of some auxiliary means, like the brackets with guide rollers, which shall cooperate with corresponding means provided on the lateral walls of the vessel of the dishwashing machine.

15 The manufacturer is therefore usually compelled to provide for two types of baskets having different size and shape, for a certain dishwashing machine outfit.

Each different type of outfit, providing for a different arrangement of pottery in the baskets needs the use of a different kind of  
20 holders inside the baskets and as a consequence a different shape both of the first and of the second basket.

Eventually the manufacturer must provide for the manufacture of many different types of baskets having different size, with increasing manufacturing difficulties and costs.

A further disadvantage is given by the fact that the buyer cannot adapt each basket and the related dish holders to his particular needs.

The object of the present invention is to avoid the above said  
5 disadvantages and to implement a unified basket which may be adapted to the different possible needs.

In order to attain the said object the present invention refers to a basket to be used in a dishwashing machine characterized in that it consists of a basic module and a series of additional elements which  
10 can be coupled to the basic module in a separable manner in order to adapt the basket to the size of the washing vessel of the machine in the area where the basket has to be located.

Particularly the invention refers to a basket to be used in a dishwashing machine having at least two baskets, one over the other,  
15 a first basket having a front wall which in the operating condition faces toward the machine door and leans out beyond the corresponding front wall of a second basket. In this case the basket according to the invention is characterized in that the said basic module presents a size which corresponds to the size of the second basket and an  
20 auxiliary containing element is provided which may be coupled to the front side of the basic module in order to adapt the latter to be used as the first basket.

The said auxiliary containing element is advantageously shaped so as to be used as a cover basket.

25 According to a further characterization the said basic module presents lateral sides which provide for brackets with rollers, coupled to the basket in a separable manner, which bear the guide rollers which cooperate with the relevant guide means located on the walls of the vessel of the dishwashing machine. Of course various  
30 kinds of roller brackets are provided in order to adapt the basket so as to be used both as the top basket and as the bottom basket.

Eventually various kinds of holders are provided for the dishes,

which may be located freely inside the basic module, in order to adapt the basket to the particular kind of pottery to be put in it. Similar holders may be already provided by the manufacturer or may be supplied later to the buyer which may locate them up to his particular needs.

Thanks to said features the manufacturer provides only for one basic module of simple and regular shape, and for a series of additional elements to be coupled to the basic module in order to allow it to be used in different cases.

- 10 It is clear that in this way a greater manufacturing simplicity and a greater cost reduction may be achieved even if complying with different user needs.

Further features and advantages of the invention are clear from the following description made referring to the attached drawings, which are supplied only as a not limiting example, and where:

- figure 1 is a schematic cross section view of a known type of dishwashing machine;
- figure 2 is a perspective exploded view of a basket according to the present invention;
- 20 - figure 3 shows a detail of a variation of figure 2;
- figure 4 is an exploded view of a further variation of figure 2;
- figure 5 shows the basket of figure 4 in the set up condition;
- figure 6 and 7 show two possible variations of the basket according to the invention.

- 25 Figure 1 shows a dishwashing machine 1 comprising a cabinet 2 which interiorly delimits a washing vessel 3, closed at its front side by a door 4 bottomly hinged to cabinet 2.

Inside washing vessel 3 there are two baskets 5 and 6, one over the other at some distance, to bear the pottery during the washing.

30 Baskets 5, 6 present lateral walls which provide guide rollers 5a, which cooperate in a known manner with corresponding guide means held on lateral walls of vessel 3.

Usually top basket 5 and bottom basket 6 have different size and different shape for many reasons.

In the case shown as an example in fig. 1, you can see that first of all the bottom basket 6 has a front wall 7, facing the door 4, which  
5 in operating condition leans out beyond the corresponding front wall of top basket 5. This is due to the fact that the door 4 has a top area with a thickness A used to locate electric components to control the operation of the machine, and a bottom area with thickness B, less than A, in order to obtain a washing vessel volume as great as  
10 possible.

As already told in the first part of present description, a further reason for differences between top basket 5 and bottom basket 6 lies in the fact that said baskets usually provide for different kind of pottery holders and for differently shaped and located guide rollers.  
15 For instance, in the case of the dishwashing machines presently manufactured by the Applicant, the top basket may provide for holders for dishes, saucers, cups, and glasses, or for cups and glasses only; the bottom basket may be left without holders in order to be used for pots or it may provide for dishes holders. Covers are usually located  
20 in a small additional basket, inside the bottom basket.

Still in the case of dishwashing machines manufactured by the Applicant, the top basket is further different from the bottom basket, having on its lateral walls two series of guide rollers located at different heights (see fig. 1) with reference to the  
25 basket itself, in order to allow to locate at different height the top basket inside the washing vessel.

In fig. 2 the reference number 10 globally indicates a basket according to the present invention. Basket 10 comprises a basic module 11 with a floor 12, a front wall 13, which in operating  
30 condition shall face the door 4, a rear wall 14 located oppositely to front wall 13 and two lateral walls 15. Basic module 11 does not provide interiorly any kind of pottery holder. Shape and construction

of such a basic module are therefore particularly simple and as a consequence of easy and inexpensive manufacture.

On lateral walls 15 of basic module 11 may be snapped brackets with guide rollers of the type indicated by number 16 or of the type indicated by number 17 depending on the fact whether the basket has to be used in the bottom or in the top position (in the latter case two series of rollers at different heights are provided for the reasons already explained above).

Brackets 16, 17 present rods 18 on which guide rollers 19 are freely mounted.

In case the basket has to be used as bottom basket, to basic module 11 is added an additional containing element 20, to be used as covers container, with hooking elements 21 in order to be hooked to front wall of basic module 11.

In the example shown in fig. 2 the additional container 20 is located externally to front wall 13 and in contact with the latter. Reference number 22 indicates the handle to grasp the additional container 20.

In the variation shown in fig. 3 the additional container 20 is shaped so as to ride on front wall 13. In this case additional container 20 has a recess 23 to mount wall 13.

Figure 4 shows a further variation: the basic module 11 lacks the front wall. In this case lateral walls 15 both show at their front ends a vertical projecting pin 24.

Additional container 20 is attached to front side of basic module 11.

In this case additional container 20 show at its ends two top tabs 25 with holes 26 to receive pins 24. Additional container 20 has further two top hooks 27 to hook to top edges of lateral walls 15 of basic module 11. Fig. 5 shows the basket in the assembled condition. Should the basket be used as a top basket, the front side of module 11 is completed by a wall 28 with tabs 29 identical to tabs 25, which receive pins 24, and with hooks 27a. Inside basic module 11 are located pottery holders for instance of types indicated by reference

numbers 30, 31, 32 in figures 6 and 7.

Such holders merely lie inside the basic module otherwise they may be snapped to it and are therefore easily changed with different holders if necessary.

- 5 It is therefore possible, starting from the same basic module 11 to build a series of different baskets in order to fulfil different user needs.

Of course, without changing the basic idea of the invention, it is possible to change the embodiments and the details with respect to  
10 the examples supplied, without departing from the scope of the present invention.

CLAIMS

1. Basket to be used in a dishwashing machine characterized in that it consists of a basic module (11) and a series of additional elements (16,17,20,30,31,32) which can be coupled to the basic module  
5 (11) in a separable manner in order to adapt the basket to the size of the washing vessel of the machine in the area where the basket has to be located.

2. Basket according to claim 1, to be used in a dishwashing machine having at least two baskets, one over the other, a first  
10 basket (6) having a front wall (7) which in the operating condition faces toward the machine door and leans out beyond the corresponding front wall (8) of a second basket (5), characterized in that said basic module (11) presents a size which corresponds to the size of the second basket (5) and an auxiliary containing element (20) is  
15 provided which may be coupled to the front side of the basic module (11) in order to adapt the latter to be used as the first basket.

3. Basket according to claim 2, characterized in that said additional containing element (20) is shaped so as to be used as a covers container.

20 4. Basket according to claim 3, characterized in that said additional containing element provides for a handle (22).

5. Basket according to claim 3, characterized in that said additional containing element (20) has a front wall which in operating condition faces toward the door of the dishwashing machine  
25 and which has a shape which corresponds to the door shape.

6. Basket according to claim 2, characterized in that the basic module (11) shows a floor (12), a front wall (13) which in operating condition faces toward the door of the dishwashing machine, a rear wall (14) oppositely located with respect to front wall (13), and two  
30 lateral walls (15), and that said additional containing element (20) is located externally and in contact with the front wall (13) and provides for hooking elements (21) to hook to the latter.



7. Basket according to claim 2, characterized in that said basic module (11) shows a floor (12), a front wall (13) which in operating condition faces toward the door of the dishwashing machine, a rear wall (14) oppositely located with respect to front wall (13), and two  
5 lateral walls (15), and that said additional containing element (20) rides on said front wall (13) and shows a recess (23) to mount said front wall (13).

8. Basket according to claim 2, characterized in that the basic module (11) shows a floor (12), a front open side which in operating  
10 condition faces toward the door of the dishwashing machine, a rear wall (14) oppositely located with respect to front open side, and two lateral walls (15), and that said additional containing element (20) is located at the open front side of basic module (11) and that its ends are coupled to front edges of the lateral walls (15), said basic  
15 module (11) further providing for a wall (28) which may be coupled to the basic module at its open front end in order to allow to use said module as top basket.

9. Basket according to claim 2, characterized in that said basic module (11) shows lateral walls (15) having brackets with guide  
20 rollers (19), which may be snapped on said lateral walls.

10. Basket according to claim 9, characterized in that said basic module (11) provides for different kinds of brackets with guide rollers, in order to allow to adapt the basket to be used both as top basket and as bottom basket.

25 11. Basket according to claim 1, characterized in that there are provided pottery holders freely locatable inside the basic module.

12. Basket according to claim 1, characterized in that there are provided pottery holders which may be snapped on inside the basic module.

30 13. Basket according to claim 11 or 12, characterized in that the basic module shows an area free from pottery holders in order to locate pots.

14. Basket according to any one of the preceding claim from 11 to 13, characterized in that there are provided different types of pottery holders, in order to adapt the basket to different user needs.

- 5      15. Dishwashing machine, characterized in that at least one basket according to any one of the preceding claims is therein provided.

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FIG. 1

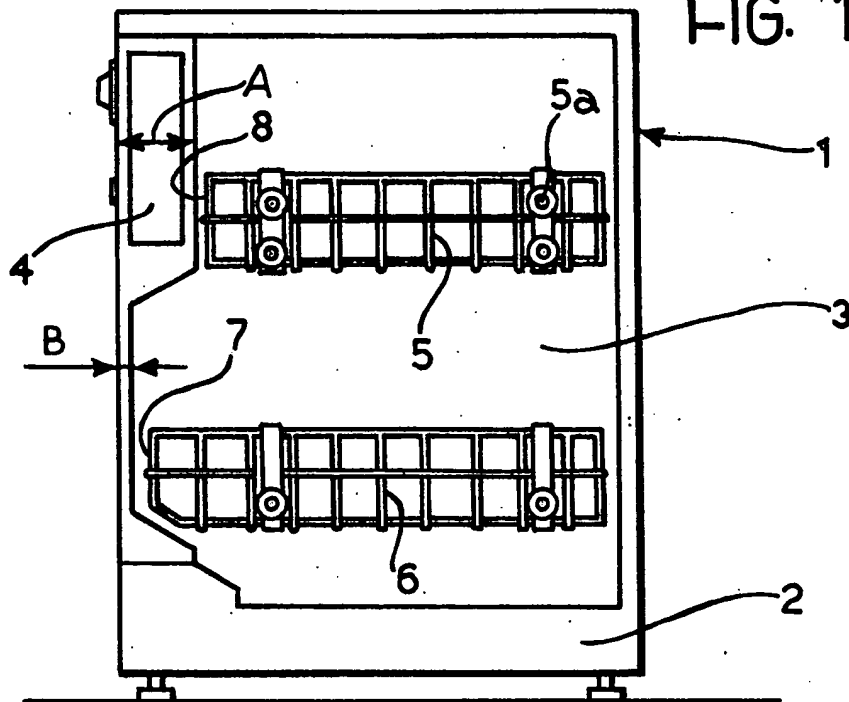
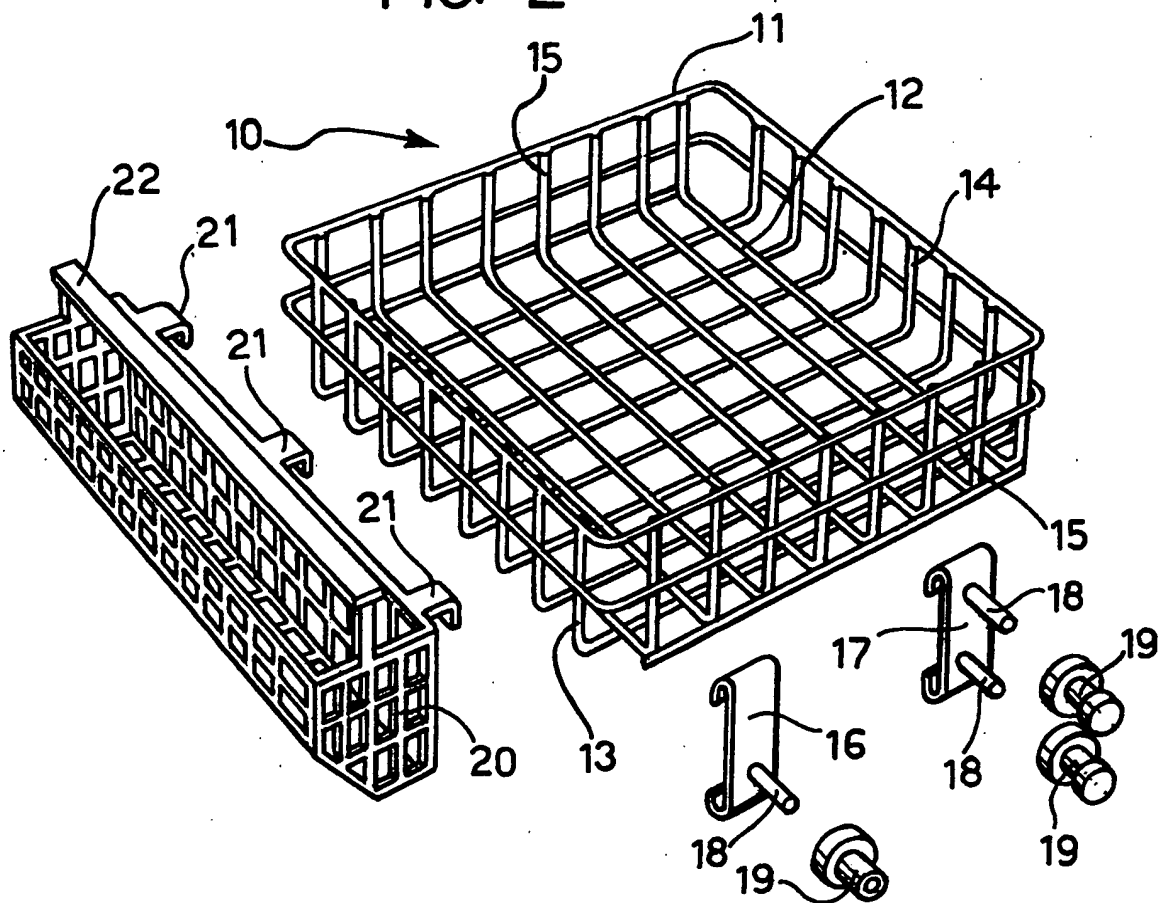


FIG. 2



22



11

29

27a

FIG. 5

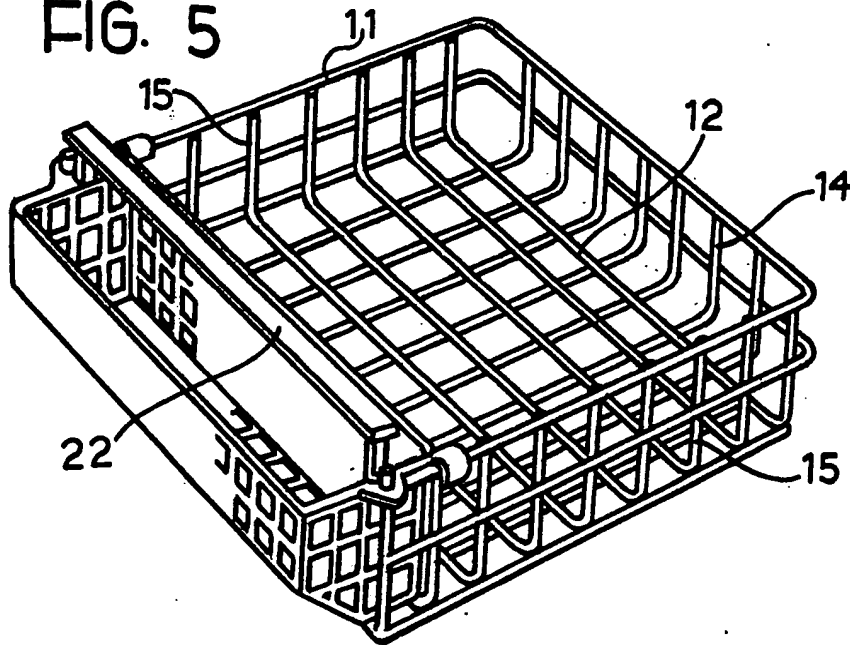


FIG. 6

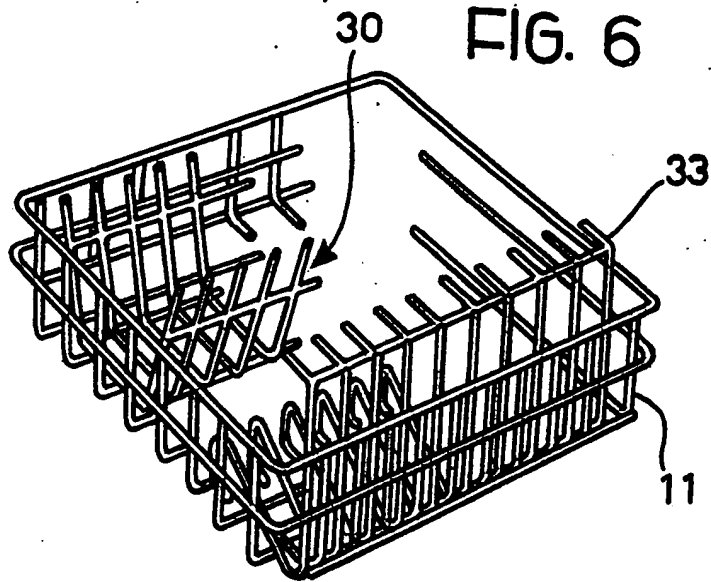
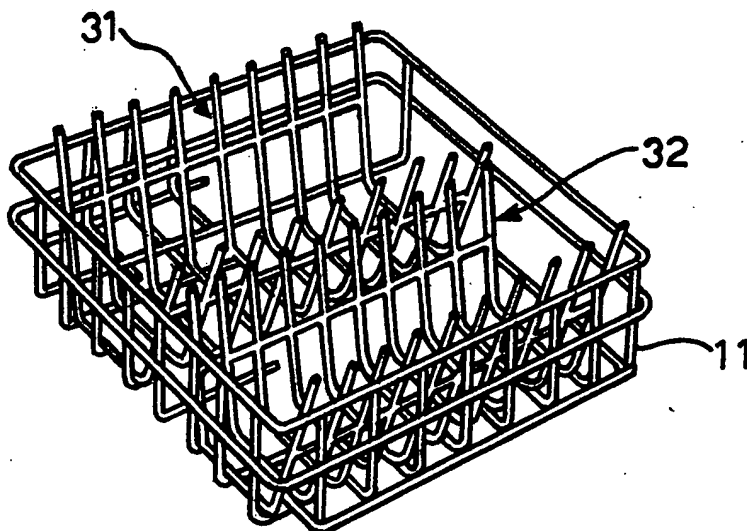


FIG. 7





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# EUROPEAN SEARCH REPORT

0143754  
Application number

EP 84 83 0305

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	DE-A-1 403 633 (BROWN, BOVERI & CIE AG)  * Whole document *  ---	1,11, 13-15	A 47 L 15/50
X	FR-A-2 128 282 (SMEG S.A.S.)  * Whole document *  ---	1,11, 13-15	
X	DE-A-3 130 627 (LICENTIA)  * Whole document *  ---	1,12- 15	
A	FR-A-1 177 662 (E.MORANDI)  * Whole document *  ---	1,2,6	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	FR-A-2 077 852 (METALTEX S.P.A.)  * Whole document *  -----	9,10	A 47 L
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 28-02-1985	Examiner SCHARTZ J.
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